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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/971,131	10/04/2001	James C. Tuthill	21488/04040	4066

24024 7590 05/30/2003

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EXAMINER

WALSH, BRIAN D

ART UNIT	PAPER NUMBER
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3722

DATE MAILED: 05/30/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/971,131

Applicant(s)

TUTHILL, JAMES C.

Examiner

Brian Walsh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 31 March 2003 is: a) ☐ approved b) ☒ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

FINAL ACTION

Drawings

1. The original objections to the drawings in the Office Action dated 22 November, 2002 are withdrawn in view of Applicant's comments and amendment.

However, the Examiner has noted the new drawing objections below.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "non-threaded section" on the spindle must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The rejections to claims 3, 8, 11, 14 and 15 under 35 USC 112, 2nd paragraph, are withdrawn in view of Applicant's amendment.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

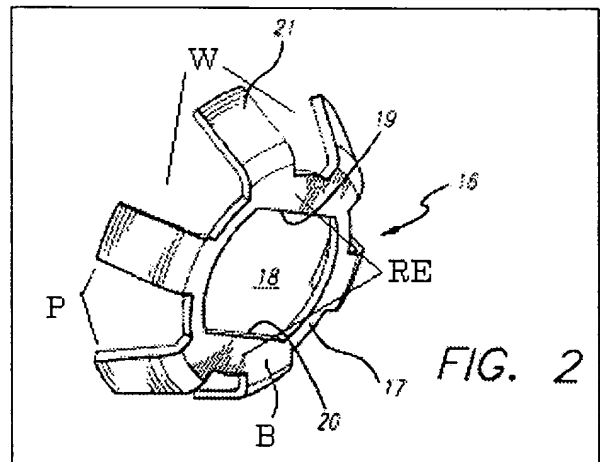
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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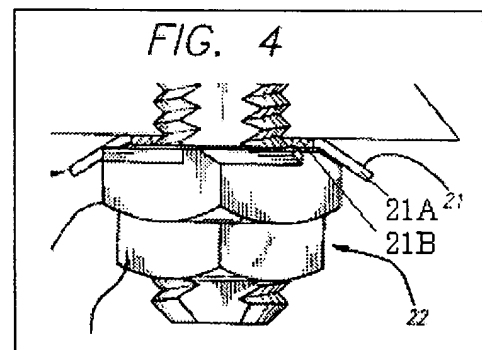
having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. 1 – 5, 8, 9, 12 – 17 and 19 are finally rejected, as necessitated by amendment, under 35 U.S.C. 103(a) as being unpatentable over Duran in view of Bias.

Regarding claims 1, 8, 13, and 16 – 17, Duran discloses a nut retainer (16) for preventing disengagement of a nut threadedly engaged to a bolt comprising an integral base (B) section and peripheral section (P) maintaining a cup-shaped configuration. Duran also discloses the base section (B) defines a central aperture (18) and wherein the peripheral section (P) includes a plurality of fingers (21) which define one or more longitudinal windows therebetween. The fingers (21) include nut engaging surfaces on the interior surface of the peripheral section. It is clear from figure 2, Duran further discloses the fingers include a flared end bent towards the center of the spindle nut retainer.



Regarding claim 2, it is clear from figures 4 and 10 that Duran discloses the nut engaging surfaces each comprise two angled surfaces (21A, 21B). Please refer to a partial capture of figure 4 to the right.



Regarding claims 3 and 9, Duran discloses the central aperture (18) is D-shaped.

Regarding claim 4, Duran discloses the base section (17) of the nut retainer is flat.

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Regarding claim 5, Duran discloses the base section (17) is reinforced (RE) around the central aperture (18).

Regarding claim 12, Duran discloses the nut retainer (16) is made form steel (Col. 2, lines 46 – 47).

Regarding claims 14 and 15, Duran discloses the base (11) has a “D-shaped” cross-section (14) adjacent to the first end and the retainer (16) circumscribes the cross-section of the base resulting in a rotational interference between the base and the nut retainer.

Regarding claim 19, Duran discloses the nut comprises a non-threaded section (14) with an arrangement of the nut, nut and retainer in the same orientation as the instant invention.

Duran fails to show a peripheral cup-shaped section that is generally perpendicular to a base section.

Bias discloses a locking mechanism similar to both Duran and the instant invention. It is clear that the device disclosed by Bias operates in a nearly identical manner. Furthermore, Bias discloses the peripheral section (32) is generally perpendicular to a base section (31).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the peripheral section of Duran to be generally perpendicular as taught by Bias since Grub teaches this configuration in order to hold the washer in assembly with the nut in the locking assembly (Col. 4, lines 33 – 39).

5. Claims 7, 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duran in view of Bias and in further view of Giachinta et. al.

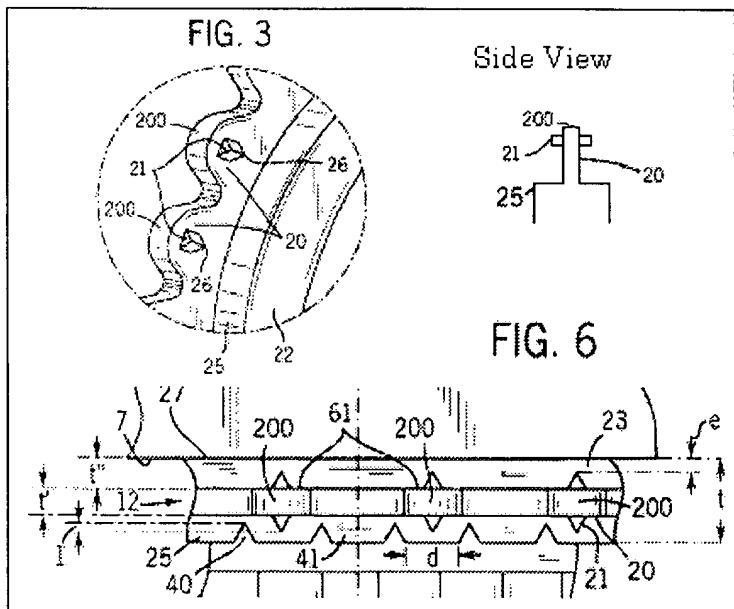
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Regarding claim 7, Duran and Bias disclose all of the elements as set forth in the above rejections, however, Duran and Bias fail to disclose an integrally formed ring at an end opposite the base section.

Giachinta et. al. discloses a retainer (12) for preventing disengagement of a nut (14) to a base (2). Giachinta et. al. discloses a peripheral section (200 in figure 3) including an integrally formed ring (25 in figure 3) at an end opposite the base section (23 in figure 6).

Regarding claims, 11 and 18, Duran and Bias disclose all of the elements as set forth in the above rejections, however, they fail to disclose "T-shaped" fingers.

Giachinta et. al. discloses a retainer (12) for preventing disengagement of a nut (14) to a base (2). In figures 3 and 6, it is clear that Giachinta et. al. discloses the fingers (200) have protrusions (21) on both a first and second side. When seen from a transverse view, the fingers would appear to have a "T-shape." Please see the attached drawings.



Therefore, it would have been

obvious to one having ordinary skill in the art at the time the invention was made to modify the retainer of Duran and Bias to include the ring and "T-shape" fingers as taught by Giachinta et. al. since Giachinta et. al. discloses the use of the ring in combination with the protrusions of the retainer and nut in order to prevent rotation (Col. 1, lines 64 – 67 and Col. 3, lines 39 – 40).

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6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duran in view of Bias and in further view of Worthing.

Duran and Bias disclose all of the elements as set forth in the above rejections, however, Duran and Bias fail to disclose the retainer is made from a polymer.

Worthing discloses a coupling system (72) comprising a retainer (88) similar to the instant invention. Worthing discloses each of the structural members in the coupling system can be formed from plastic (polymer).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the retainer of Duran and Bias to be made from a polymer as taught by Worthing since Worthing teaches plastic may be used in the place of stainless steel or other materials to provide a suitable structure capable of handling the accuracy and forces required (Col. 4, lines 7 – 11).

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duran in view of Bias and in further view of Cronin II et. al.

Duran and Bias disclose all of the elements as set forth in the above rejections, however, Duran and Bias fail to disclose the base section comprises a tab bent in line with the fingers.

Cronin II et. al. discloses a nut retainer system (40) including a central aperture in a peripheral section (20) with a base section (24) wherein the base section comprises a tab (29) bent in line with fingers (28). Please refer to figure 1.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the retaining system of Duran and Bias to include the bent tab

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of Cronin II et. al., since Cronin II et. al. discloses the use of the tab in order to engage a keyway, flat or slot in a spindle (Col. 2, lines 62 – 64),

8. Claims 20 – 24 are finally rejected, as necessitated by amendment, under 35 U.S.C. 103(a) as being unpatentable over Duran in view of Bias in view of Giachinta et al. and in further view of Bynum.

Duran, Bias and Giachinta et al. all disclose all of the elements as set forth in the above rejections, however, they fail to disclose the peripheral section includes inwardly extending portions for snapping over the nut to lock the nut retainer in place.

Bynum discloses an apparatus similar to the instant invention including a base section (56) having fingers (42) extending generally perpendicular to the base section which have inwardly extending portions (44) for snapping over the nut (24) to lock the retainer into place.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the devices set forth by Duran, Bias and Giachinta et al. to include the “snapping” portions as taught by Bynum since Bynum teaches the use of these portions to secure the device when the nut is rotated and tightened (Col. 5, lines 5 – 15).

Response to Arguments

9. Applicant's arguments with respect to the rejection claims 1 – 5, 8, 9 and 12 - 17 under 35 USC 102(b) have been considered but are deemed not persuasive.

10. Applicant's arguments pertaining to the “generally perpendicular section” added by amendment are moot in view of the new grounds for rejection, necessitated by amendment.

Regarding claims 1 and 8, Applicant argues first that Duran would not function if it had a “cup shaped configuration.” The Examiner disagrees since Duran certainly discloses an apparatus as much in the shape of a bowl (definition of “cup,” Merriam-Webster Dictionary) as is set forth by the instant invention. If Duran were to be modified such that the fingers (21 in Duran) were generally perpendicular to the base section, the fingers would then further engage the side surfaces (24 in Duran) of the nut. If Duran’s fingers were bent at an abrupt 90-degree angle at the point they bend toward the center of the retainer it is possible that they would not properly engage the abutment surfaces on the nut. However, if they continued to bend in the manner in which they are illustrated such that they obtained a generally perpendicular state, the Examiner maintains that they would function properly. This combination is set forth in the 103(a) rejection with Duran in view of Bias. Figure 8b of Bias illustrates generally the same configuration as both Duran and the instant invention and includes the generally perpendicular section. Duran simply includes the interference at a different location on the side surfaces of the nut. Applicant cites no specific arguments pertaining to claims 3 and 4.

Applicant next argues that Duran fails to include a reinforced section on the base of the apparatus. Applicant is reminded that the broadest reasonable interpretation of the claims will be assumed during examination. In response to Applicant's argument that the references fail to show certain features of Applicant’s invention, it is noted that the features upon which Applicant relies (i.e., thickness of the base) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Gemst*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Applicant states in claim 5 “... reinforced *around* said central aperture.” The Examiner agrees that Duran

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clearly fails to show a reinforcing thickness to the base section, however, in figure 2 it is clear that Duran does not simply show an aperture (18) of circular dimension. The circle is truncated by two flat surfaces (19, 20) that increase the overall amount of material on the base section *around the central aperture* in comparison to a simple circular aperture which therefore leads one of ordinary skill in the art to believe that the base section is reinforced. (Emphasis by Examiner). Applicant cites no specific arguments regarding claims 9 and 12.

Applicant's arguments regarding claim 13, the "cup-shaped configuration" have been addressed as above. Applicant states no specific arguments regarding claims 14 – 16.

Regarding claim 17, again, the claims will be interpreted in the broadest reasonable manner. Duran discloses fingers (21) that initially project directly radially outward from the base section and then curve toward a center of the apparatus. These bent sections, considered "ends" by the Examiner, are determined to be bent toward a center of the retainer.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

12. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Faxing of Responses to Office Actions

13. In order to reduce pendency and avoid potential delays, TC 3700 is encouraging FAXing of responses to Office Actions directly into the Group at (703) 872-9302. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into TC 3700 will be promptly forwarded to the examiner.


14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Walsh whose telephone number is (703) 605-0638. The examiner can normally be reached on Monday - Friday 7:30 A.M. to 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on (703) 308-2159. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.



BDW
May 29, 2003



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